DOCUMENT RESUME

ED 050 584 EM 008 944

AUTHOR	Avner, R. A.
TITLE	TUTOR User's Memo Using AUTHOR MODE.
INSTITUTION	Illinois Univ., Urbana. Computer-Based Education Lab.
PUB DATE	1 Jan 71
NOTE	17p.; See also TUTOR Manual, EM 008 943 and TUTOR Memo, EM 008 945
EDRS PRICE	EDRS Price MF-$0.65 HC-$3.29
DESCRIPTORS	*Computer Assisted Instruction, *Manuals, *Programing Languages
IDENTIFIERS	PLATO, Programmed Logic for Automated Teaching Operations, *TUTOR

ABSTRACT

While a PLATO station is normally used to present lessons (STUDENT MODE), a station can also be used by a teacher to produce or alter lessons or to control lesson presentation (AUTHOR MODE). This memo describes the manner in which student records and lesson material are stored in the computer memory, prescribes the method of entry to AUTHOR MODE, and defines the operations available in the AUTHOR MODE to change or add to lessons and to examine student records. (JY)

ED050584

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

TUTOR USER'S MEMO

Using AUTHOR MODE

JANUARY 1, 1971

EM 008 944

Suggestions for correction or improvement of this memo should be directed to R.A. Avner (370 ERL).

Computer-based Education Research Laboratory
University of Illinois at Urbana-Champaign
Urbana, Illinois 61801

Using AUTHOR MODE

page
Lesson Storage.....1
Student Record Storage.....2
Entry to AUTHOR MODE.....3
Levels of Operations in AUTHOR MODE.....4
Becoming an Experienced Author.....4
AUTHOR MODE Summary.....5
AUTHOR Operations.....6
LESSON Operations.....8
BLOCK Operations.....10
LINE Operations.....12
RECORDS Operations.....14
Short-Cuts.....16

While a PLATO station is normally used to present lessons, (i.e., operate in STUDENT MODE), a station can also be used by a teacher to produce or alter lessons or to control lesson presentation (i.e., operate in AUTHOR MODE). Any station can be quickly shifted at any time between these two modes of operation.

Lesson Storage

Lesson material is normally stored permanently in magnetic disk storage and temporarily in magnetic core storage. Information can be retrieved more rapidly from core storage than from disk storage. However, because of its high cost, only a limited amount of core storage is available. Whenever a lesson is to be used by students, a temporary copy of the disk version of that lesson is placed in core storage. Using a lesson in core storage, the computer can usually respond to a student request within 1/10 of a second. Far longer delays might result if the computer had to get lesson information directly from the disk. When student use of a lesson in completed, the temporary copy of the lesson in core is simply destroyed. An author can alter the original (disk) version of a lesson while students are using the copy in core. Changes made to the disk version will, of course, not be seen by students until the author replaces the old copy in core with a copy of the revised version.

Student Record Storage

Like lessons, student records for each course are permanently stored on disk with temporary copies being transferred to core for student use. A student record is assigned by name to each student in a particular course. This student record allows storage of information concerning the location of the student within a lesson in the course as well as special information desired by the author. A student signs in for a lesson by typing his name and the name of his course. If the computer finds a record under these names and the proper lesson is in core storage, the student is sent immediately to that part of the lesson specified in the student records. Otherwise, an appropriate error message is given. During a lesson the student uses the copy of his records which was placed in the computer core at the time he signed in. At the end of a class period, the outdated disk copy of a student's records is replaced by the up-to-date version in core. This updating may be done automatically for an entire class by the instructor or by the computer operator. Alternately, each student may update his own records at any time by "signing out". Individual sign-out is performed by the following three steps:

1. Press the TERM key,
2. Type the word "FINISHED,"
3. Press key NEXT.

When a message stating "WELCOME TO PLATO" appears, updating of the student's records is complete and the station is available for use by another student or author.

Included in the records for each student are 139 storage spaces (TUTOR student variables) for information unique to that student. Information stored in these variables may be altered during a lesson or may be preset before a lesson by an author. Changes made to variables by students during a lesson may be inspected by examining student records.

Lessons, records and the PLATO system are protected by several security features. The two features which are of immediate concern to a new author are (1) the AUTHOR MODE access code and (2) the lesson security code. The AUTHOR MODE access code is used to shift a station into AUTHOR MODE, while the lesson security code permits authoring access to specific lessons. At the time a new author begins writing a lesson, he may specify his own lesson security code and will be told the current AUTHOR MODE access code. The codes are entered in the following manner:

1. Find a station with either a "WELCOME TO PLATO" or a "SESSION FINISHED" message. (Updating student records at a station being used by a student will produce the "WELCOME TO PLATO" message.)

2. Type the AUTHOR MODE access code word. A message will then appear requesting your lesson security code word.

3. Type your security code word (a wedge will appear on the screen for each key pressed) and press NEXT. You should see the AUTHOR MODE display. If your lessons are not protected by security codes, simply press NEXT without entering a code.

AUTHOR Operations. These are performed on an entire lesson or on groups of lessons, e.g., printing a copy of a lesson, reading lessons into core memory for student use, preparing student records for a class, or selecting a lesson for editing.

LESSON Operations. These are performed within a specific lesson, e.g., adding space for a new block of commands or selecting a specific block of commands for editing.

BLOCK Operations. These are performed on entire lines within a major section of a lesson (consisting of one or more Units), e.g., inspecting specific lines, deleting lines, or selecting a line to be replaced.

LINE Operations: These are performed within a single line of the lesson, e.g., replacing portions of an old line or typing a new line.

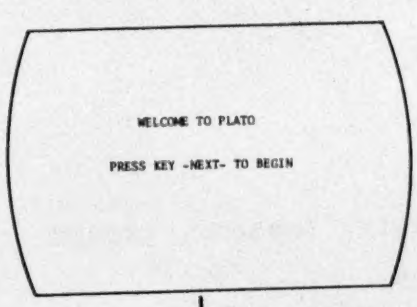
RECORDS Operations. These are performed on student records for a specific course, e.g., starting new student records or inspecting TUTOR student variables.

Note that the levels form a hierarchy; LINE operations are a special case of BLOCK operations, BLOCK operations a special case of LESSON operations and LESSON and RECORDS are special cases of AUTHOR operations. A chart showing the connection between STUDENT MODE and AUTHOR MODE and summarizing the relationships between the various levels of AUTHOR MODE appears on the next page. This chart may be of some aid to the new author in visualizing the structure of AUTHOR MODE. Detailed descriptions of the operations at each level appear on following pages.

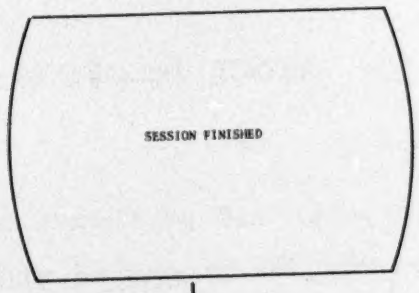
Becoming an Experienced Author

New authors are strongly urged to learn AUTHOR MODE use by practice. After reading through this memo for a general idea of what is available, the author should spend some time at a station trying out all available options. Included in the exploration should be intentional mistakes and checks on the limits of the various operations.

AUTHOR MODE SUMMARY

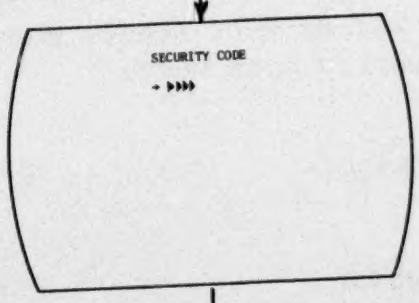


OR



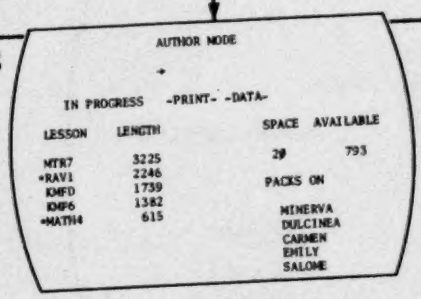
STUDENT MODE
AUTHOR MODE

Type AUTHOR MODE Access Code



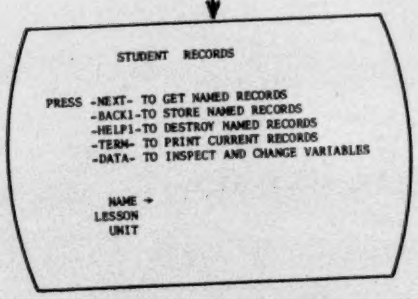
Type lesson security code (if any)

Press NEXT



Type RECORDS
Press NEXT

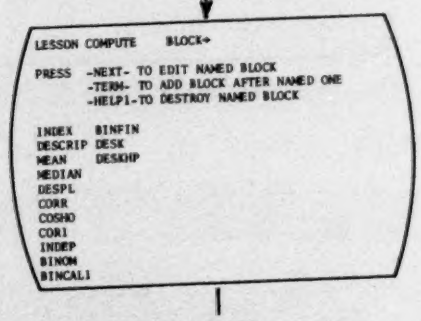
Type Course name
Press NEXT



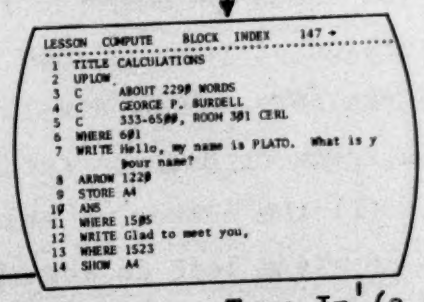
RECORDS
(Alter or inspect student records)

Type EDIT
Press NEXT

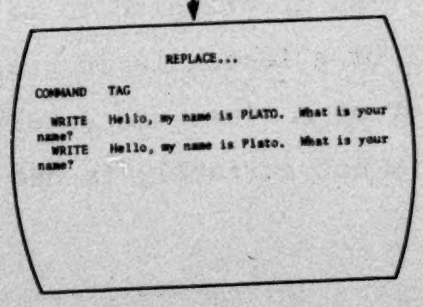
Type lesson name
(e.g. "COMPUTE")
Press NEXT



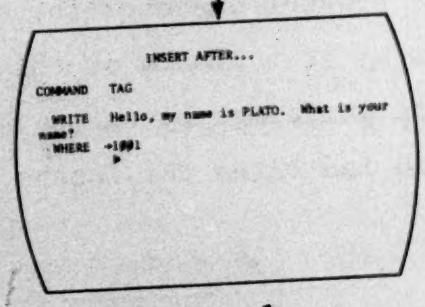
Type BLOCK name
(e.g., "INDEX")
Press NEXT


LESSON COMPUTE BLOCK INDEX 147 →
1 TITLE CALCULATIONS
2 UPLOW
3 C ABOUT 2290 WORDS
4 C GEORGE P. BURDELL
5 C 333-6500, ROOM 301 CERL
6 WHERE 600
7 WRITE Hello, my name is PLATO. What is y
your name?
8 ARROW 1220
9 STORE A4
10 ANS
11 WHERE 1505
12 WRITE Glad to meet you,
13 WHERE 1523
14 SHOW A4

Type Rn (e.g. R7)
Press NEXT



Type In (e.g. I7)
Press NEXT



AUTHOR LEVEL
EDIT, READIN, DELETE, or PRINT a lesson
Access to RECORDS

LESSON LEVEL
Add, edit, delete, or change name of a BLOCK

BLOCK LEVEL
Insert,
Replace,
Delete, or
Save material

LINE LEVEL
Replace old lines
or
Insert new lines

Press key BACK to return to prior levels

AUTHOR OPERATIONS

Operations at this level are performed on entire lessons, groups of lessons, student records, or groups of students.

To reach AUTHOR LEVEL from STUDENT MODE: Enter the AUTHOR MODE access code and the lesson security code word.

To reach STUDENT MODE from AUTHOR LEVEL: Press key BACK.

EXAMPLE

```
                    AUTHOR MODE

                    →

   IN PROGRESS   -PRINT- -DATA-

 LESSON     LENGTH              SPACE  AVAILABLE

 MTR7         3225               2Ø        793
*RAV1         2246
 KMFD         1739             PACKS ON
 KMF6         1382
*MATH4         615               MINERVA
                                 DULCINEA
                                 CARMEN
                                 EMILY
                                 SALOME
```

To specify operations: Type the name of the operation. It will appear after the arrow. Press NEXT to activate.

NOTES

To protect lessons (and the system), always return a station to the "WELCOME TO PLATO" (or "SESSION FINISHED") message when finished using it.

Space used by copies of lessons read into core storage for student use is indicated on the AUTHOR MODE display. Lesson length and space available are measured in terms of 8-character "words". Under "SPACE AVAILABLE" two numbers indicate (1) the number of stations which can operate and (2) the number of words of space left in the computer. Also indicated are the code names of disk packs available at that moment to authors. The IN PROGRESS line will be present whenever the system is prepared to collect student DATA from lessons or if a READIN or PRINT of a lesson is in progress. PRINT or READIN may be performed by one author at a time. An asterisk to the left of a lesson name indicates the lesson is not currently in use by any student.

1. TO EDIT A SPECIFIED LESSON: Type "EDIT" and press key NEXT. The EDIT display will request the lesson name. Enter this name and press NEXT. Operations shift to LESSON level.

2. TO PRINT A SPECIFIED LESSON: Type "PRINT" and press key NEXT. The PRINT display will appear. Enter the lesson name and the names of Units which inclusively bound sections for which a printed copy is desired. Press key TERM to begin printing. The entire lesson is printed if the lesson name alone is entered. Contact the computer operator to receive your print-out.

3. TO READ LESSONS INTO CORE STORAGE: Type "READIN" and press key NEXT. The READIN display will request the names of lessons desired. Lessons which are designed for use together must be placed in the computer in the same READIN or connections between them will not work. Use the ARROW key to move to a new line after entering each lesson name. Press key NEXT to begin READIN.

4. TO DELETE A LESSON FROM CORE STORAGE: Type "DELETE" and press key NEXT. Enter the lesson name on the DELETE display and press key NEXT. Upon return to the AUTHOR MODE display, verify that the lesson is no longer listed. If more than one version of a lesson is in core, the last one read in is deleted. Student records are updated for students working on the deleted lesson at the time of deletion.

5. TO START A CLASS: If data for the class are to be recorded, the "IN PROGRESS" line must show the word -DATA-. (If it does not, contact the computer operator.) Type "START" and press key NEXT. The "WELCOME TO PLATO" message will be displayed on all terminals not in use. Contact the computer operator when the class is to be halted. (After the operator stops students, all student records are updated, student screens will show a "SESSION FINISHED" message, and -DATA- will disappear from the AUTHOR level "IN PROGRESS" line.)

6. FOR ACCESS TO STUDENT RECORDS: Type "RECORDS" and press key NEXT. A message will request the name of the course. Enter the course name and press key NEXT. Operations shift to RECORDS level.

NOTES

After READIN, any detected errors are displayed. Illegal (generally misspelled) commands and branches to Units which are not available are listed along with the Unit in which the commands or branches were found. Units with duplicate names will be listed. A "COMPUTER FILLED" message will occur if there is insufficient room for your lesson or lessons. After carefully noting all errors, the author may press the shifted BACK key to return to the AUTHOR MODE display. No harm results from testing a lesson containing errors (the lesson will behave as if the erroneous commands or nonexistent branches are not present) but many problems are avoided if all errors are corrected as they are found.

Two authors attempting to use certain equipment simultaneously, e.g., the printer, will receive an appropriate message. Press key BACK and try again when the IN PROGRESS message indicates the operation is complete.

A PACK ERR message is produced when a specified lesson or course is not found on any of the disk packs currently in operation. Verify that you spelled the name correctly and that the disk pack is available.

A SYSTEM FAILURE or DISK ERR message is produced when a specified lesson or course is present but an error in the manner it was stored may be present. Make another attempt to perform the operation before notifying the computer operator.

LESSON OPERATIONS

Operations at this level are performed within a single lesson. Operations are on major storage spaces called BLOCKS which each contain one or more Units.

To reach LESSON LEVEL
from AUTHOR LEVEL: Request EDIT option, type the lesson name and press the NEXT key.

To reach AUTHOR LEVEL
from LESSON LEVEL: Press BACK key.

EXAMPLE

```
LESSON COMPUTE    BLOCK→

PRESS  -NEXT- TO EDIT NAMED BLOCK
       -TERM- TO ADD BLOCK AFTER NAMED ONE
       -HELP1-TO DESTROY NAMED BLOCK

INDEX   BINFIN
DESCRIP DESK
MEAN    DESKHP
MEDIAN
DESPL
CORR
COSHO
COR1
INDEP
BINOM
BINCAL1
```

To specify operations: Type the name of the BLOCK to be operated on. The name will appear after the arrow. Consult the LESSON OPERATIONS descriptions on the next page for the key required to perform a specific operation.

1. TO START A NEW BLOCK: Type the name of the current BLOCK which the new BLOCK is to follow (if nothing is typed, the new BLOCK is placed at the beginning of the lesson). When the TERM key is pressed, a message requests a name for the new BLOCK. Subsequent operations are at the BLOCK level.

2. TO DESTROY A BLOCK: Type the name of the BLOCK. The entire BLOCK is destroyed when the shifted HELP key is pressed.

3. TO EDIT A BLOCK: Type the name of the BLOCK. When the NEXT key is pressed operation shifts to the BLOCK level.

4. TO CHANGE THE NAME OF A BLOCK: Type the current name and press the ANS key. A special display will show the old name and request a new one.

5. TO COPY A BLOCK: Type the name of the BLOCK which the copied BLOCK is to follow. When the DATA key is pressed, lesson and unit names will be requested. BLOCKs may be copied from any lesson which the author is able to edit (including the present lesson). Press NEXT after entering the lesson name and the BLOCK name. The copied BLOCK will then appear in the lesson under the name *BLOCK*. You should change this by using option 4 above.

6. TO SHIFT FROM UPCASE TO UPLOW: Type the word UPLOW. Press the TERM key. When "UPLOW" disappears, the author will be able to use UPLOW characters (See NOTES below.)

7. TO SHIFT A LESSON FROM UPLOW TO UPCASE: Type the word UPLOW. Press the shifted HELP key. When the word"UPLOW" disappears, the lesson will be shifted to UPCASE. Any UPLOW commands in the lesson should also be deleted by using the EDIT feature.

NOTES

The total number of BLOCKs available in a single lesson is limited to between 32 and 64. The maximum amount of material that may be stored in a single lesson is 4800 8-character words. As each new BLOCK is begun, a 75-word chunk of space is reserved. If the author attempts to put more than 75 words of material in a BLOCK, the BLOCK capacity is automatically expanded to a maximum of 150 words. Since a BLOCK can reserve either 75 or 150 words of space, an author could exhaust the number of BLOCKs available in a single lesson by using as few as 32 BLOCKs (all 150 words long), as many as 64 BLOCKs (all 75 words long), or any number between 32 and 64 BLOCKs (consisting of a mixture of 75-word and 150-word BLOCKs). The number of words stored in a given BLOCK is indicated in the BLOCK display (See BLOCK LEVEL OPERATIONS).

Unless otherwise desired by the author, the characters which appear on the student or author screens are automatically upper case ("UPCASE"). If the author desires both upper and lower case letters ("UPLOW") or the special Cyrillic characters, he must include an UPLOW command in his lesson (so the student sees UPLOW characters in the lesson) and make the change indicated in option 6 above (so the author sees UPLOW characters in AUTHOR MODE.)

10

Operations at this level are performed within a BLOCK. A BLOCK generally consists of many TUTOR statements and may include several TUTOR Units.

To reach BLOCK LEVEL
from LESSON LEVEL: Type BLOCK name and press NEXT key.

To reach LESSON LEVEL
from BLOCK LEVEL: Press BACK key.

EXAMPLE

```
LESSON  COMPUTE    BLOCK  INDEX    147 →
 1  TITLE CALCULATIONS
 2  UPLOW
 3  C     ABOUT 229Ø WORDS
 4  C     GEORGE P. BURDELL
 5  C     333-65ØØ, ROOM 3Ø1 CERL
 6  WHERE 6Ø1
 7  WRITE Hello, my name is PLATO.  What is y
       Þour name?
 8  ARROW 122Ø
 9  STORE A4
1Ø  ANS
11  WHERE 15Ø5
12  WRITE Glad to meet you,
13  WHERE 1523
14  SHOW  A4
```

To specify operations: Enter the code for desired operation. It will appear after the arrow in the BLOCK display heading. Press the NEXT key to execute the operation (exception: deletion requires shifted HELP for execution).

NOTES

The number of "words" of space used by the BLOCK is shown just left of the arrow on the BLOCK display. See the LESSON LEVEL Notes for a discussion of space measurement.

Lines appearing on the display are numbered for the convenience of the author in specifying operations. Note that some long "lines" (line 7 in the above example) will not fit on a single line of the screen when the command word is also shown.

WARNING

For convenience, the first UNIT in a BLOCK is automatically given the name of the BLOCK in which it appears. This means that a UNIT command with the BLOCK name as its tag is automatically produced but is not displayed (it would take up valuable lesson space). The author should act as if this were the first statement in each BLOCK. In the example shown above, the material in the BLOCK titled "INDEX" would behave as if the first statement in the BLOCK were "UNIT INDEX", even though the statement is not visible. If the author mistakenly adds another UNIT statement having the BLOCK name as its tag, the lesson will not function properly.

1. TO MOVE THE DISPLAY FORWARD (up): Type the letter "F" and a number. When NEXT is pressed, the display moves up the specified number of lines.

2. TO MOVE THE DISPLAY BACKWARD (down): Type the letter "B" and a number. When NEXT is pressed, the display moves down the specified number of lines.

3. TO PROCEDE TO NEXT UNIT IN BLOCK: Type the letter "U". When Next is pressed, the display moves to next UNIT in BLOCK. To move to a specified UNIT, type "U" followed by the Unit name (e.g., "UTWO for Unit TWO) and press NEXT.

4. TO DELETE LINES: Type the letter "D" and a number. When the shifted HELP key is pressed, the specified number of lines (beginning with line 1) are deleted.

5. TO SAVE LINES: Type the letter "S" and a number. When NEXT is pressed, the specified number of lines (beginning with line 1) are stored. The saved lines may be used until the author leaves the lesson or saves a new set of lines. (See Note below.)

6. TO INSERT NEW LINES: Type the letter "I" and a number. The number specifies which line (counting from line 1) the insertion will follow. When NEXT is pressed, the author is shifted to LINE operations.

7. TO INSERT SAVED LINES: Type the letters "IS". When NEXT is pressed, the saved lines will be inserted following line 1 of the display. An operation like "I3S" is also permitted and would perform the insertion after the specified line.

8. TO REPLACE LINES: Type the letter "R" and a number. The number specifies which line the replacement will begin with. When NEXT is pressed, the author is shifted to LINE operations.

9. TO REPLACE WITH SAVED LINES: Type the letters "RS". When NEXT is pressed, the saved line(s) will replace the top line(s) of the display. Lines may be replaced beginning at positions other than the top of the display by use of expressions like "R3S".

NOTES

Negative numbers are accepted. Thus, "I-1" would allow a line to be inserted above line 1 of the display.

If no number is given, the operation is performed as if the number "1" were present. Thus both "F" and "F1" move the display up one line.

If the requested operation cannot be done, nothing will happen when NEXT is pressed. For example, space provided for the SAVE option is limited. If insufficient space is available to "SAVE" many long lines, the code will not disappear when NEXT is pressed.

When storage space within the BLOCK is filled, attempts to insert additional material will not be accepted. This situation is also indicated by a row of Xs following the last line in the BLOCK. Material in a filled BLOCK may be split between two BLOCKs by using the BLOCK copy in LESSON LEVEL and making appropriate deletions.

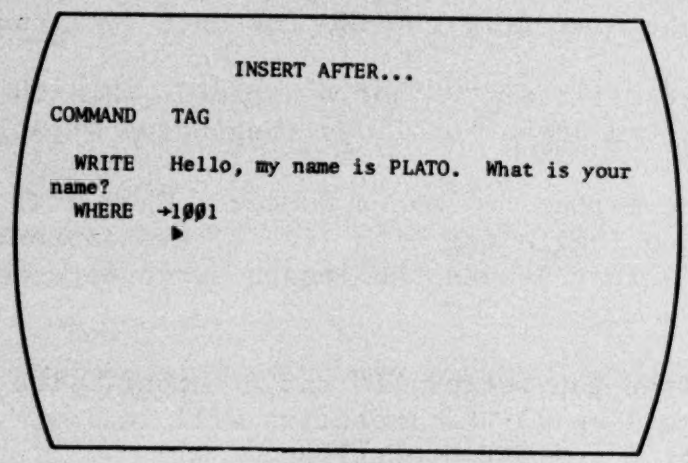
On a printed copy of a lesson produced by the PRINT option (LESSON LEVEL), Units are separated from each other by a row of asterisks. For ease in locating the beginning of each BLOCK on a printout, the first UNIT in a BLOCK is given a longer row of asterisks.

Operations at this level are performed on single lines (commands plus tags). Insertion of new lines and replacement of old lines are the two operations.

To reach INSERT
from BLOCK LEVEL: Request to Insert material after specified line.

To reach BLOCK LEVEL
from INSERT: Press BACK key.

EXAMPLE

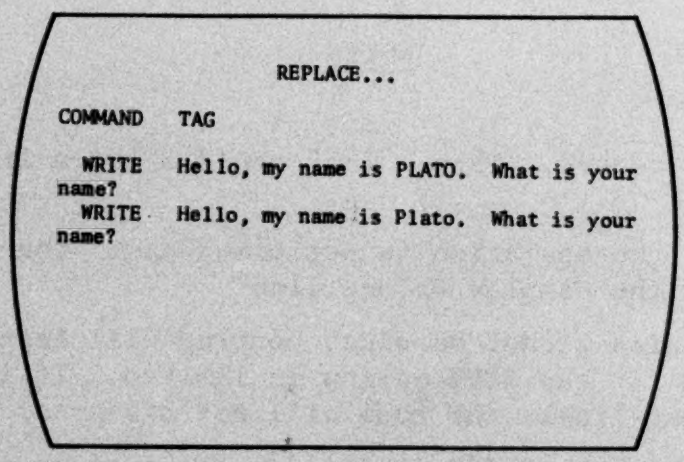


Operation: New lines are inserted successively. Prior line is displayed.

To reach REPLACE
from BLOCK LEVEL: Request to Replace material beginning with specified line.

To reach BLOCK LEVEL
from REPLACE: Press BACK key.

EXAMPLE



Operation: Lines displayed are successively replaced by new lines entered by author.

CAUTION: Authors should be very careful in doing successive replacements. If a line is encountered which is not to be replaced, exit immediately by pressing BACK. If any typing was mistakenly done be sure to erase it by pressing shifted ERASE before exiting or the erroneous typing will replace the original line.

TO PRODUCE A NEW LINE:

1. Type the new command. Press NEXT key (Arrow will move to TAG section).
2. Type the new tag. Press NEXT key (display will move to next line).

TO COPY A PORTION OF THE PREVIOUS LINE:

The copy feature is especially useful for correction of errors found after a line is completed. Rather than retype the entire line the author may automatically copy the good material up to the error, type the correction, and then automatically copy the good material following the corrected error. A moveable marker allows the author to indicate where automatic copying is to begin or end. Deletions or additions to automatically copied material can be made in the normal fashion.

To use the automatic copying feature, position the copy marker on the previous line by use of the following:

(a) The △ key moves the marker one place to the right with each press.
(b) The □ key moves the marker 10 places to the right with each press.
(c) The shifted △ key moves the marker one place to the left.
(d) The shifted □ key moves the marker cyclically through the tab positions in the tag.

Press the LAB key to copy material up to (and including) the character over the marker.

Press the shifted LAB key to copy material following (and including) the character over the marker.

NOTES

Typing errors can be corrected with the ERASE key for single characters or the shifted erase for an entire line.

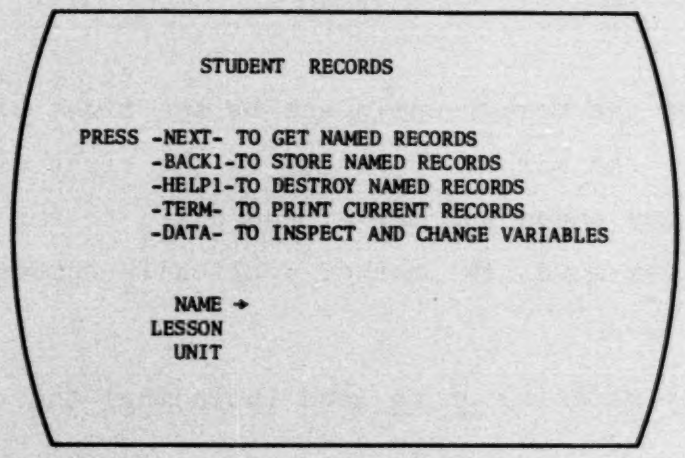
A wedge marker indicates the maximum length of a WRITE tag that can fit on a single display line in STUDENT MODE (i.e., 48 characters). Tags for other commands may be longer if desired. When the final limit of 66 characters, including "hidden" characters like shift and subscript, is reached further key presses will no longer produce characters on the screen.

Operations at this level are performed on student records for a particular COURSE. A COURSE consists of a collection of student records for up to 32 students.

To reach RECORDS LEVEL from AUTHOR LEVEL: Type RECORDS and press key NEXT. A message will request the COURSE name. Type the COURSE name and press key NEXT.

To reach AUTHOR LEVEL from RECORDS LEVEL: Press key BACK.

EXAMPLE



To specify operations: Enter a student name and press the key for the desired operation as specified on the STUDENT RECORDS display.

NOTES

Student records are stored on disk. To be used (by a student in STUDENT MODE or an author at RECORDS level in AUTHOR MODE), a copy of the student record must be brought into the computer. When use is complete, an updated version of the RECORD is sent back to the disk where it will replace the original version. Until an updated version is returned to disk, the original disk version remains unchanged.

1. TO SET UP NEW STUDENT RECORDS: Type the student's name (up to 16 characters), a lesson name, and Unit name on the RECORDS display, using the ARROW key to move between lines. If the UNIT line is left blank, the student will be started in the first Unit of the lesson. Values of student variables may also be preset. (Press the DATA key and follow the directions in the display that appears.) When the shifted BACK key is pressed, the student name should disappear indicating that the record has been sent to disk. Note that only the student name disappears. Thus, many other students could be started at the same point in the same lesson simply by alternately typing each name and pressing the shifted BACK key.

2. TO BRING STUDENT RECORDS FROM DISK TO THE COMPUTER: Type the name of the student and press key NEXT. If records are available, the screen will flicker and then display the version that was found on disk. This step must be taken before it is possible to print or inspect the student variables in a record already on disk.

3. TO SEE THE NAME OF STUDENTS IN A COURSE: Press the shifted DATA key and read the material in the column headed "ALPHABETIC". (Names are split into two "words" of 8 characters each.) A printed copy of the list of students who have records in a given course may also be obtained at the AUTHOR LEVEL by requesting a PRINT and entering the course name instead of a lesson name.

A number of short-cuts are available to the author who is thoroughly familiar with the standard procedures for using AUTHOR MODE. These techniques are designed to save author time during certain sequences of frequently performed operations.

1. To skip the "WELCOME TO PLATO" message when shifting from AUTHOR MODE to STUDENT MODE - Press key NEXT rather than BACK when on the AUTHOR LEVEL display.

2. To shift directly from STUDENT MODE to AUTHOR MODE - Press key TERM, type the AUTHOR MODE access code word, press key NEXT. WARNING: Student records are not updated when this procedure is used. This technique should never be used while students are watching (the code word is visible on the screen as it is typed).

3. To read a single lesson into core storage and shift immediately into STUDENT MODE in the first Unit of the lesson - Type the lesson name while at the author level display. Press the shifted LAB key. If errors are detected, the list of errors will be displayed and entry to the lesson is by the standard method.

4. Quick DELETE method - While on the AUTHOR LEVEL display, type the name of the lesson to be deleted. Deletion is performed when the shifted HELP key is pressed.

5. Quick EDIT method - While on the AUTHOR LOVEL display, type the name of the lesson to be edited. Operations shift to LESSON LEVEL when the shifted NEXT key is pressed.

Additional short-cuts and special features are also available for the experienced author. These are best acquired by consultation with PLATO personnel when the author frequently encounters a particular problem in editing or producing material.